

REMARKS

Claims 1 – 3 and 5 – 6 remain in this application. Claim 4 has been cancelled. Claims 1 – 3 and 5 – 6 have been amended. Reconsideration of this application in view of the amendments noted is respectfully requested.

Claim 1 has been amended such that “the charge transport material” is now limited to a --polymer charge transport material--. Hence, only polymer charge transport materials are included in the claims. Claims 2 and 3, depending from claim 1, have likewise been amended to recite --the polymer charge transport material-- instead of “the charge transport material.” Accordingly, claim 4 has been cancelled. Further, claim 5 has been amended to depend from claim 1 instead of cancelled claim 4. Finally, the dependent claims have been amended to change the first word “An” to --The--.

In the August 14, 2006 Office Action, claims 1 – 6 were rejected under 35 U.S.C. 112, first paragraph as failing to comply with the enablement requirement. The Office action states that the specification of the present invention provides insufficient guidance to be able to determine, without undue experimentation, the scope of charge transport materials that satisfy Expressions (1) and (2). Also, based upon page 66 of the specification citing that whether polymers of the disclosed formulas satisfy Expressions (1) and (2) depends on synthesis methods and synthesis conditions, the Office action further states that the specification provides insufficient information even in the case of claims 5 and 6, which claim structural formulas.

The key feature of the present invention, however, does not lie per se in the structural formula of the charge transport material, but rather in the characteristics of the charge transport material that satisfies Expressions (1) and (2) and that is used in the organic electroluminescent (EL) device of the present invention. Page 66 of the specification, cited in the Office action, is intended to remark only in general terms that the purity of the product obtained may vary depending upon synthesis methods and conditions.

It is a matter of course, for one skilled in the art, that merely synthesizing a polymer charge transport material can result in materials varying in purity.

Turning to the Office action's position that insufficient guidance is provided to obtain a charge transport material that satisfies Expressions (1) and (2), pages 5 through 7 of the specification disclose that if residual charges accumulate in the charge transport layer, the EL device using the charge transport material would have a short life. It is clearly stated on page 6 that "an organic EL device made of a material which tends to cause charge accumulation has a significantly reduced life." Thus, from the specification it would be evident to one skilled in the art that improving the purity of the charge transport material, especially by eliminating impurities that affect the carrier (charge), leads to the present invention.

Based upon such descriptions as these in the specification, one skilled in the art would easily learn that a charge transport material that satisfies Expressions (1) and (2) in an electric field of $10 \text{ V}/\mu\text{m}$ can be obtained by eliminating impurities that affect the carrier (charge), in accordance with known synthesis methods and without undue experimentation. It is a matter of common knowledge to those of ordinary skill in the art in the field of synthesizing polymer charge transport materials to eliminate impurities by known methods selected according to the type of material.

Moreover, once a polymer charge transport material is obtained, such as one of the numerous examples listed in the specification, it can easily be determined whether the polymer charge transport material satisfies Expressions (1) and (2) by measuring a transient photocurrent waveform of the material in an electric field of $10 \text{ V}/\mu\text{m}$, as claimed in claim 1. No undue experimentation is required to determine if a certain polymer charge transport material is within the scope of the invention.

The references cited in the Office action only disclose charge transport materials that include a partial structure of the present invention. The materials claimed in present claim 5 are charge transport materials that satisfy Expressions (1) and (2) and that have a repeating unit that includes a partial structure represented by Formula (I-1) or (I-2). There

is no teaching or suggestion in the cited references regarding the parameters as defined in the present invention or the residual charge. Further, although not compared on the basis of the exact same material, an organic EL device prepared as in Examples 1 to 4 of the present invention has a lifetime ranging from 42 to 53 hours, which is longer than any of the results shown in Table 4 of U.S. Patent Application Pub. No. 2002/0050597 or Table 13 of U.S. Patent Application Pub. No. 2002/0182440.

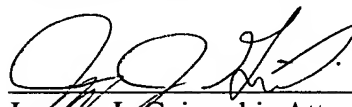
With respect to the IDS received February 20, 2004, applicant has included a copy of the third non-patent literature (Proceedings of the 38th Meeting . . .) for the file wrapper.

This amendment and request for reconsideration is felt to be fully responsive to the comments and suggestions of the examiner and to place this application in condition for allowance. Favorable action is requested.

Respectfully submitted,

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A handwritten signature in black ink, appearing to read "J. Gajewski", is written over a horizontal line.

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